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L14 ANSWER 1 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:476010 HCAPLUS
DOCUMENT NUMBER: 129:201510
TITLE: .beta.-Thromboglobulin in urine and plasma: influence of coronary risk factors
AUTHOR(S): Mundal, Hivard Holth; Hjemdahl, Paul; Urdal, Petter; Kierulf, Peter; Perneby, Christina; Berg, Kaare; Gjesdal, Knut
CORPORATE SOURCE: Departments of Cardiology, Ulleval University Hospital, Oslo, Norway
SOURCE: Thrombosis Research (1998), 90(5), 229-237
CODEN: THBRAA; ISSN: 0049-3848
PUBLISHER: Elsevier Science Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Blood platelet activation in vivo was evaluated by measuring .beta.-thromboglobulin in plasma and **high mol. wt.** .beta.-thromboglobulin in urine in hypertensive smoking and nonsmoking middle-aged men (n=36) and in normotensive age-matched controls (n=40). We found no significant linear relationships between nocturnal or resting urinary **high mol. wt.** .beta.-thromboglobulin and plasma .beta.-thromboglobulin in the combined hypertensive and normotensive groups. The excretion of **high mol. wt.** .beta.-thromboglobulin correlated significantly with diastolic blood pressure when all subjects were pooled. After 60 min supine rest, nonsmokers had **higher** excretion of **high mol. wt.** .beta.-thromboglobulin than smokers. Plasma .beta.-thromboglobulin levels tended to be higher in hypertensives. In multivariate analyses, resting **high mol. wt.** .beta.-thromboglobulin excretion was pos. related to diastolic blood pressure and neg. related to smoking, whereas plasma .beta.-thromboglobulin was pos. related to diastolic blood pressure and inversely related to **apolipoprotein A1** and B. We conclude that urinary **high mol. wt.** .beta.-thromboglobulin and plasma .beta.-thromboglobulin are not closely related, but are complementary analyses, as there are methodol. confounders for both variables.
REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 2 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:232648 HCAPLUS
DOCUMENT NUMBER: 129:148
TITLE: Efficacy of fusion peptide homologs in blocking cell lysis and HIV-induced fusion
AUTHOR(S): Silburn, Katherine A.; Mcphee, Dale A.; Maerz, Anne L.; Poumbourios, Pantelis; Whittaker, Robert G.; Kirkpatrick, Alan; Reilly, Wayne G.; Manthey, Michael K.; Curtain, Cyril C.
CORPORATE SOURCE: AIDS Cellular Biology Unit, Macfarlane Burnet Centre for Medical Research, Fairfield, 3078, Australia
SOURCE: AIDS Research and Human Retroviruses (1998), 14(5), 385-392
CODEN: ARHRE7; ISSN: 0889-2229
PUBLISHER: Mary Ann Liebert, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Contrary to earlier reports, the authors have found that tri- and

hexapeptides analogous or homologous with segments of the 23-residue N-terminal fusion sequence (FS) of the viral transmembrane glycoprotein gp41 (residues 517-539) did not significantly inhibit HIV-1-induced syncytium formation, using an uninfected cell-infected cell fusion assay. In contrast, the authors found that the **high mol. wt. apolipoprotein A-1** and a 23-residue analog of the FS, with the phenylalanine residues at positions 524 and 527 replaced with alanine residues, were effective inhibitors. Although the tripeptides were ineffective as inhibitors of syncytium formation, the authors found a no. of them inhibited red cell lysis induced by the synthetic peptide AVGIGALFLGFLGAAGSTMGARS (based on the HIV-1 gp41 FS). This effect was also seen with **apolipoprotein A-1**. The Ala524,527 analog of the fusion sequence could not be tested in this system because it was hemolytic. The authors concluded that the smaller peptides were effective inhibitors of hemolysis because they interfered with pore formation by the fusion sequence peptide, either by disrupting the pores or by preventing the peptide from adopting the .alpha.-helical conformation found in the pores. Membrane fusion, which is a prelude to syncytium formation, has been shown to require the fusion sequence in the .beta.-strand conformation. The authors argue that small peptides would be unable to block interaction between such strands, although larger mols., such as **apolipoprotein A-1** and the Ala524,527 analog, would be able to do so and thus inhibit fusion. It seems, therefore, that a successful drug directed against the FS-cell membrane interaction stage of syncytium formation would need to be of relatively **high mol. wt.** and complexity.

REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 3 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1996:579379 HCAPLUS
DOCUMENT NUMBER: 125:273142
TITLE: Cloning and characterization of cDNAs coding for heavy and light chains of a **monoclonal antibody** (MabA34) specific for **human** plasma apolipoprotein A-I
AUTHOR(S): Kwak, Ju-Won; Lee, Dong-Ik; Choi, Byung-Kwon; Cho, Won-Kyung; Lee, Sang-Han; Park, Yong-Bok; Han, Moon Hi
CORPORATE SOURCE: Korea Research Institute of Bioscience and Biotechnology, KIST, Daeduck Science Town, Taejon, 305-600, S. Korea
SOURCE: Gene (1996), 173(2), 257-259
CODEN: GENED6; ISSN: 0378-1119
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The authors have detd. the nucleotide (nt) sequences encoding the heavy (H)- and light (L)-chains of the Fab fragment of a murine **monoclonal antibody**, MabA34 (.gamma.1, .kappa.), which is specific for **human** plasma apolipoprotein A-I of high-d. lipoproteins. The variable (V) regions of the H- and L-chains were revealed to be members of mouse H-chain subgroup II(A) and .kappa. L-chain subgroup II, resp. A few unusual amino acids in the V region of the H-chain, and nt residues probably introduced by somatic mutations from germline genes were also identified.

L14 ANSWER 4 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1993:624215 HCAPLUS
DOCUMENT NUMBER: 119:224215

TITLE: Antimicrobial activity of lipoprotein particles containing **apolipoprotein A1**
AUTHOR(S): Tada, Norio; Sakamoto, Takuya; Kagami, Akihiko; Mochizuki, Keiko; Kurosaka, Kosei
CORPORATE SOURCE: Dep. Intern. Med., Aoto Hosp., Tokyo, 125, Japan
SOURCE: Molecular and Cellular Biochemistry (1993), 119(1-2), 171-8
CODEN: MCBIB8; ISSN: 0300-8177
DOCUMENT TYPE: Journal
LANGUAGE: English

AB **Human** plasma in vitro inhibits the growth of coagulase neg. staphylococci, S. epidermidis, which may be pathogenic in the immunocompromised host. To det. the antimicrobial components, serum was fractionated by column chromatog., which revealed that elution areas where lipoproteins can be yielded had high antimicrobial activity against S. epidermidis. Therefore, lipoprotein fractions, including very low d. lipoprotein (VLDL), low d. lipoprotein (LDL) and high d. lipoprotein (HDL), were sepd. by ultracentrifugation and incubated with S. epidermidis. All 3 lipoprotein fractions suppressed bacterial growth within the first 3 h but VLDL enhanced bacterial growth after 9 h of incubation compared with the control. HDL, however, inhibited bacterial growth throughout 21 h of incubation. To confirm these results, serum from healthy volunteers was sepd. by ion exchange column chromatog. and again by HPLC to purify the antimicrobial fraction. In the protein anal. with gradient polyacrylamide-SDS gel, **apolipoprotein A1** (apo A1), which is a major apolipoprotein of HDL, was detected in the antimicrobial fraction. Therefore, this fraction was loaded onto an immunoaffinity column coupled with the anti-apo A1 **monoclonal antibody** (Mab). Unbound fraction had no antimicrobial activity, but anti-S. epidermidis activity was recovered from the bound fraction which consisted mainly of apo A1, A11 and apo C in protein compn. These results indicated that the antimicrobial activity was assocd. with the apo A1-contg. lipoprotein particles (HDL). This property of HDL may directly affect bacterial growth and promote the self-defense mechanisms of normal and immunocompromised individuals.

L14 ANSWER 5 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1993:226147 HCAPLUS
DOCUMENT NUMBER: 118:226147
TITLE: Insulin modulation of **human** apolipoprotein B mRNA translation: Studies in an in vitro cell-free system from HepG2 cells
AUTHOR(S): Adeli, Khosrow; Theriault, Andre
CORPORATE SOURCE: Dep. Chem. Biochem., Univ. Windsor, Windsor, ON, N9B 3P4, Can.
SOURCE: Biochemistry and Cell Biology (1992), 70(12), 1301-12
CODEN: BCBIEQ; ISSN: 0829-8211
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Insulin modulation of apolipoprotein B gene expression was studied at the translational level by the use of a cell-free translation system from a hepatoma cell-line, HepG2. Exts. of HepG2 cells lysed with lysolecithin had high in vitro protein synthesizing activity utilizing endogenous mRNA. The level of peptide chain initiation was high, as suggested by an inhibition of translation by edeine. The translation products of endogenous mRNA in HepG2 cell-free lysate were probed with anti-apolipoprotein B antibodies to investigate its synthesis. A 550 kilodalton (kDa) polypeptide was selected by a polyclonal antibody, as well as a **monoclonal antibody**, against the C-terminal end of apolipoprotein B mol. This in vitro synthesized polypeptide

compared well in size with the in vivo product. The HepG2 lysate also efficiently synthesized in vitro a no. of other proteins including albumin, apolipoprotein E, **apolipoprotein A1**, and actin; the in vivo synthesis of polypeptides as large as 500 kDa was unexpected and has not previously been demonstrated in a cell-free system. The HepG2 translation system was used to investigate the effect of insulin on the in vitro translation of apolipoprotein B. Lysates prepd. from HepG2 cells treated with insulin had have lower translational activity (by an av. of 52.3%) for apolipoprotein B compared with lysates from control untreated cells. In vitro synthesis of actin and apolipoprotein E were unaffected under these conditions. The insulin-stimulated decline in in vitro apolipoprotein B synthesis was not due to a change in apolipoprotein B mRNA levels as detd. by slot- and Northern-blot analyses, suggesting that the inhibitory effect of insulin may be exerted partly at the level of apolipoprotein B mRNA translation.

L14 ANSWER 6 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1993:163552 HCAPLUS
DOCUMENT NUMBER: 118:163552
TITLE: New in vitro findings on the "free" form of **apolipoprotein A-1**
AUTHOR(S): Giunta, Sergio; Maddalena-Peruzzi, Anna; Gaudio, Maria Rosa; Semprini, Alberto
CORPORATE SOURCE: Serv. Ric. Chim. Clin., Ist. Patol. Endocr. Metab., Rome, Italy
SOURCE: Annals of the New York Academy of Sciences (1992), 673(Physiopathological Processes of Aging), 342-9
CODEN: ANYAA9; ISSN: 0077-8923
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Using immunofixation electrophoresis, free **apolipoprotein A-1** was sepd. from the apo A-1 assocd. with high-d. lipoproteins. Free **apolipoprotein A-1** is a low-mol.-mass form of apo A-1 that seems to contain an extremely low quantity of lipids. The use of immunofixation electrophoresis as a tool for probing free apo A-1 has revealed new and interesting findings, such as its artificial increase during serum storage at temps. of 0-4.degree.. Clin., a decrease to the point of disappearance of free apo A-1 in some patients with liver cirrhosis was demonstrated. Moreover, anti-**human** apo A-1 murine **monoclonal antibody** and **monoclonal antibody** mixt. fail to ppt. free apo A-1 in agarose systems. This discovery has important implications both for basic knowledge about apolipoproteins and for practical reasons concerning variability in those immunoassays (radial immunodiffusion) utilizing **monoclonal antibody** mixts.

L14 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1992:648028 HCAPLUS
DOCUMENT NUMBER: 117:248028
TITLE: Serum A1 and B apolipoprotein determination: comparison of an immunoturbidimetric method with a **monoclonal-antibody**-based radial immunodiffusion assay
AUTHOR(S): Postiglione, Loredana; Spano, Angelo; Varricchio, Paola; Larizza, Giovanni; Oriente, Alfonso; Gattozzi, Domenico; Oriente, Pasquale
CORPORATE SOURCE: 2nd Med. Sch., Univ. Naples, Naples, I-80131, Italy
SOURCE: International Journal of Clinical & Laboratory Research (1992), 21(4), 318-20
CODEN: ICLREA; ISSN: 0940-5437

DOCUMENT TYPE: Journal
LANGUAGE: English
AB Epidemiol. and clin. evidence indicated that **apolipoprotein A1** and B detn. can better define the lipoprotein pattern in normal subjects and in subjects with coronary heart disease. In this paper, a recent immunoturbidimetric method for routine **apolipoprotein A1** and B measurement (using the Turbitimer system and com. available antisera) was evaluated. The precision and the accuracy of the method were previously considered. Within-run and between-run coeffs. of variation (ranging 1.67-5.04%) for both assays indicate good precision of the method. Accuracy was evaluated on 2 consecutive days using a std. serum for **apolipoprotein A1** and B. The bias obtained was 3.79% for **apolipoprotein A1** and 2.30% for B. **Apolipoproteins A1** and B were then measured in 100 normal and hyperlipemic sera with the immunoturbidimetric assay and radial immunodiffusion (using the **monoclonal antibodies**). The data obtained were evaluated by linear regression anal. The good correlation between the 2 methods suggests that the immunoturbidimetric assay can be usually performed for routine **apolipoprotein A1** and B detn. because of its lower cost, speed, and simplicity.

L14 ANSWER 8 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1992:527683 HCAPLUS
DOCUMENT NUMBER: 117:127683
TITLE: Serum A1 and B apolipoprotein determination: comparison of an immunoturbidimetric method with a **monoclonal-antibody**-based radial immunodiffusion assay
AUTHOR(S): Postiglione, Loredana; Spano, Angelo; Varricchio, Paola; Larizza, Giovanni; Oriente, Alfonso; Gattozzi, Domenico; Oriente, Pasquale
CORPORATE SOURCE: 2nd Med. Sch., Univ. Naples, Naples, I-80131, Italy
SOURCE: International Journal of Clinical & Laboratory Research (1992), 21(4), 318-20
CODEN: ICLREA; ISSN: 0940-5437
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Epidemiol. and clin. evidence have indicated that **apolipoprotein A1** and B detn. can define better the lipoprotein pattern in normal subjects and in subjects with coronary heart disease. A recent immunoturbidimetric method for routine **apolipoprotein A1** and B measurement (using the Turbitimer system and com. available antisera) was evaluated. The precision and the accuracy of the method were considered previously. Within-run and between-run coeffs. of variation (ranging 1.67-5.04%) for both assays indicate good precision. Accuracy was evaluated on 2 consecutive days by using a std. serum for **apolipoprotein A1** and B. The bias obtained was 3.79% for **apolipoprotein A1** and 2.30% for B. **Apolipoproteins A1** and B then were measured in 100 normal and hyperlipemic sera with the immunoturbidimetric assay and radial immunodiffusion (using the **monoclonal antibodies**). The data obtained were evaluated by linear regression anal. (A1, $r = 0.893$; B, $r = 0.862$). The good correlation between the 2 methods suggests that the immunoturbidimetric assay can be usefully performed for routine **apolipoprotein A1** and B detn. because of its lower cost, rapidity, and simplicity.

L14 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1991:674976 HCAPLUS
DOCUMENT NUMBER: 115:274976

TITLE: **Monoclonal antibodies** for quantitation of **apolipoprotein A1**
AUTHOR(S): Sorell, L.; Perez, M. E.; Rodriguez, M.; Cabrera, M.; Torres, M. B.; Civico, A.; Alvarez, H.; Zacca, E.; Rodriguez, E.
CORPORATE SOURCE: Inst. Angiol. Cir. Vasc., Havana, Cuba
SOURCE: Biotecnologia Aplicada (1990), 7(1), 58-65
CODEN: BTAPEP; ISSN: 0864-4551
DOCUMENT TYPE: Journal
LANGUAGE: Spanish
AB **Monoclonal antibodies** (Mabs) against **apolipoprotein A1** (APO A1) were produced by immunizing BALB/c mice with APO A1 isolated from **human** plasma. They were IgG1 class. Three of them were purified from ascitic fluid by affinity chromatog. using Protein A Sepharose. Two Mabs recognizing different antigenic determinants in APO A1 were selected for a sandwich ELISA. The intra- and inter-assay coeffs. of variation were 3.4 and 10% resp. This system was used for APO A1 detn. in serum samples. Patients with acute myocardial infarction 45-80 yr old and those with peripheral atherosclerosis 40-59-yr-old showed lower values for APO A1 than healthy controls. Older patients with peripheral atherosclerosis (between 60 and 80 yr) did not show decreased levels of APO A1.

L14 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1990:402861 HCAPLUS
DOCUMENT NUMBER: 113:2861
TITLE: Quantitative determination of **apolipoprotein A1** in blood serum with a **monoclonal antibody** in a noncompetitive ELISA
AUTHOR(S): Winkler, L.; Mueller, D. W.; Dargel, R.; Jaeger, L.
CORPORATE SOURCE: Bereich Med., Friedrich-Schiller-Univ., Jena, DDR-6900, Ger. Dem. Rep.
SOURCE: Zeitschrift fuer Medizinische Laboratoriumsdiagnostik (1990), 31(3), 159-64
CODEN: ZMLADB; ISSN: 0323-5637
DOCUMENT TYPE: Journal
LANGUAGE: German
AB A noncompetitive sandwich ELISA for the detn. of apolipoprotein A-I (I) in **human** blood serum is described, employing monoclonal anti-**human** I antibodies raised in mice and com. East German products. The I detection range is 5-1-- .mu.g/L with a within-sum and a day-to-day coeff. of variation of 4 and 8%, resp. Good agreements with I detns. by immunoturbidimetry were obsd., and no effects of serum urea or other proteins on the assay were seen.

L14 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1989:473272 HCAPLUS
DOCUMENT NUMBER: 111:73272
TITLE: Heterogeneity in the conformation of apo A-I on the surface of HDL particles
AUTHOR(S): Ayrault-Jarrier; Bekaert, E.; Petit, E.; Pastier, D.; Polonovski, J.; Pau, B.; Paolucci, F.; Hervaud, E.; Laprade, M.
CORPORATE SOURCE: UFR Saint-Antoine, Paris, 75571/12, Fr.
SOURCE: Advances in Experimental Medicine and Biology (1988), 243(Eicosanoids, Apolipoproteins, Lipoprotein Part. Atheroscler.), 149-55
CODEN: AEMBAP; ISSN: 0065-2598
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Strategies were developed which allow localization of epitopes recognized by **monoclonal antibodies** of **apolipoprotein A-1** (apo-A-I) and which demonstrate the heterogeneity of apo-A-I conformation on the surface of high-d. lipoprotein (HDL) particles. Location of epitopes in segments 13-20 and 233-239 (amino acid residues nos.) demonstrated that the C-terminal fragment is more hydrophilic than the onset of the N-terminus. This indicates the accessibility of the N-terminus on the surface of HDL particles. In contrast, the C-terminus is in the .beta.-sheet conformation and is not accessible on all apo-A-I-contg. particles, being available on .apprx.40% of HDL and differing among the HDL classes. The differences in antibody reactivities indicate that certain domains of apo-A-I are sterically cryptic in lipoproteins and that accessibility of these domains may vary among individual lipoproteins.

L14 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1989:402952 HCAPLUS
DOCUMENT NUMBER: 111:2952
TITLE: **Monoclonal antibodies** to **human** A-I apolipoprotein and characterization of cyanogen bromide fragments of APOA-I
AUTHOR(S): Fidge, N.; Morrison, J.; Nugent, T.; Tozuka, M.
CORPORATE SOURCE: Baker Med. Res. Inst., Prahran, Australia
SOURCE: Biochimica et Biophysica Acta (1989), 1003(1), 84-90
CODEN: BBACAQ; ISSN: 0006-3002
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Several **monoclonal antibodies** to **human** apolipoprotein A-I (I) were produced after immunizing mice with pure delipidated I. These **monoclonal antibodies** were characterized for their ability to react with whole lipoproteins, apolipoproteins, and fragments of I generated by cleavage with CNBr. The data suggested that prodn. of **monoclonal antibodies** using I as antigen was influenced by 2 major epitopes subsequently localized to CNBr fragments 1 and 3, and have been designated antibodies 1.fwdarw.5 A-IB and 6.fwdarw.10 A-IB, resp. CNBr fragments were 1st purified to homogeneity before screening by competitive displacement or immunoblotting procedures. Definitive characterization of one antibody series (1.fwdarw.5 A-IB) depended ultimately on Western blotting following isoelec. focusing of purified I fragments. This technique identified the epitope for these antibodies to fragment 1, an identification not fully concluded from competitive displacement studies. These studies also revealed the presence of microheterogeneity in fragment 1 (as well as in fragment 4) of I, suggesting that structural variations in several regions may account for the polymorphism obsd. in this apolipoprotein.

L14 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1989:211469 HCAPLUS
DOCUMENT NUMBER: 110:211469
TITLE: Isolation, characterization and quantification of **apolipoproteins A-1** and B of the Golden Syrian hamster (Mesocricetus auratus) and modification of their levels by dietary cholesterol
AUTHOR(S): Burton, Pamela M.; Chiou, Y. Melody
CORPORATE SOURCE: Dep. Cancer Dev. Biol., Syntex Res., Palo Alto, CA, 94304, USA
SOURCE: Comparative Biochemistry and Physiology, Part B: Biochemistry & Molecular Biology (1989), 92B(4), 667-73

CODEN: CBPBB8; ISSN: 0305-0491
DOCUMENT TYPE: Journal
LANGUAGE: English
AB **Apolipoprotein A-1**, isolated from hamster **high**-d. lipoprotein (HDL) possessed a **mol. wt.** of approx. 27,000. Its amino acid compn. differed from **human** apo A-1 and it contained a higher threonine to serine ratio and a higher methionine and leucine content. The concn. in normal serum was 126.0 mg/dL. Apolipoprotein B, isolated from hamster low-d. lipoprotein (LDL) consisted of 3 major components when analyzed by SDS-PAGE with Mrs of 635, 460, and 305 Kd, resp. Hamster apo B possessed a higher aspartic acid to glutamic acid ratio and a higher methionine and valine content than **human** apo B. The concn. in normal serum was 20.9 mg/dL. The apolipoprotein and lipoprotein profile of hamsters fed a high cholesterol diet for 30 days changed considerably. Total serum cholesterol levels increased 7-fold; LDL levels increased 14 fold; HDL levels doubled and total serum triglyceride increased 3-fold. Apo A-1 levels increased by 45% and apo B levels increased 5-fold.

L14 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1989:132553 HCAPLUS
DOCUMENT NUMBER: 110:132553
TITLE: The 27-kilodalton thyroxine (T4)-binding protein is **human** apolipoprotein A-I: identification of a 68-kilodalton high density lipoprotein that binds T4
AUTHOR(S): Benvenga, Salvatore
CORPORATE SOURCE: Clin. Endocrinol. Branch, Natl. Inst. Diabetes, Dig. Kidney Dis., Bethesda, MD, 20892, USA
SOURCE: Endocrinology (1989), 124(3), 1265-9
CODEN: ENDOAO; ISSN: 0013-7227
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A previously described 66 kDa T4-binding protein was identified as a lipoprotein composed of 2 mols. of apolipoprotein A-I, 5 of cholesterol esters, 9 of phosphatidylcholine, and 2 of sphingomyelin. This 68.4 kDa high-d. lipoprotein (HDL) corresponds to the minor approx. 67 kDa HDL subfraction that was recently demonstrated as binding most of the HDL-assocd. T4. Since lipids inhibit the binding of T4 to apolipoprotein A-I, the very-low-mol.-wt. lipid content (16 mol/mol) of this 68 kDa HDL relative to that (>100 mol/mol) of **high mol. wt.** HDL subfractions may account for the preferential binding of T4 to the low- mol.-wt. subfraction.

L14 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1988:33005 HCAPLUS
DOCUMENT NUMBER: 108:33005
TITLE: A recombinant apoA-1-protein A hybrid reproduces the binding parameters of **HDL** to its receptor
AUTHOR(S): Monaco, Lucia; Bond, Heather M.; Howell, Kathryn E.; Cortese, Riccardo
CORPORATE SOURCE: European Mol. Biol. Lab., Heidelberg, 6900, Fed. Rep. Ger.
SOURCE: EMBO Journal (1987), 6(11), 3253-60
CODEN: EMJODG; ISSN: 0261-4189
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A plasmid, pLM8, was constructed contg. the coding sequence of the mature **human** apoA-1 fused to the coding sequence of the IgG-binding domains of protein A (PA) from Staphylococcus aureus. The hybrid gene is transcribed in Escherichia coli under the control of a **heat**

-sensitive repressor, leading to the synthesis of large amts. of hybrid protein (apo-A-1-PA). The hybrid protein was purified by denaturation with urea and alkali, renaturation and affinity chromatog. on an IgG Sepharose column. ApoA-1-PA is sol. and has an Mr of 316 kd, as detd. by gel filtration. This is 5 times the monomer size of 62 kd, predicted from the sequence and found by SDS-PAGE anal. Cell surface binding activity of the hybrid protein was tested using two different cell types (J774 macrophages and Fao hepatocytes) and compared to **human** high-d. lipoprotein (**HDL**). High-affinity binding was found for both ligands in both cell lines (Kd = 3.4 .times. 10-8 M in Fao cells, 4.9 .times. 10-8M in J774 cells for apoA-1-PA and 3.0 .times. 10-8M in Fao cells, 2.8 .times. 10-8M in J774 cells for **HDL**), with .apprx.2 .times. 105 high-affinity binding sites per cell. ApoA-1-PA and **HDL** effectively competed with each other for binding to the cell surface. Addnl., they both bound to a 110-kd polypeptide on a ligand blot, identifying an **HDL** receptor. The binding parameters of **HDL** were very similar to those of apoA-1-PA. It is concluded that the apoA-1 portion of **HDL** alone is responsible for the binding of **HDL** to its receptor.

L14 ANSWER 16 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1987:405456 HCAPLUS
DOCUMENT NUMBER: 107:5456
TITLE: Partial purification of lymphoblasts after in vitro immunization increases the yield in Ig-producing hybridomas
AUTHOR(S): Erkman, L.; Soldati, G.; James, R. W.; Kato, A. C.
CORPORATE SOURCE: Geneva Cantonal Hosp., Cent. Med. Univ., Geneva, 1211/4, Switz.
SOURCE: Journal of Immunological Methods (1987), 98(1), 43-52
CODEN: JIMMBG; ISSN: 0022-1759
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In vitro immunization with a **human** plasma protein (**apolipoprotein-A1**) as antigen allowed prepn. of more **monoclonal antibodies** using a 10-fold lower concn. of antigen as compared to in vivo immunization procedures. In addn., the no. of Ig-producing hybridomas after in vitro immunization could be increased by a simple one-step sepn. of the lymphoblasts on a Percoll gradient before the fusion procedure. In order to apply this procedure to in vivo immunization techniques, it is necessary to expand the B-blast/plasma cell population by culturing the spleen cells for 4-6 days before fusion. Only antibodies of the IgM class were produced with the in vitro technique. However, by combining in vivo priming with in vitro immunization, it is possible to produce specific antibodies to both IgG and IgM classes.

L14 ANSWER 17 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1986:404747 HCAPLUS
DOCUMENT NUMBER: 105:4747
TITLE: Immunochemical characterization of apolipoprotein A-I from normal **human** plasma. In vitro modification of apo A-I antigens
AUTHOR(S): Milthorp, Peter; Weech, Philip K.; Milne, Ross W.; Marcel, Yves L.
CORPORATE SOURCE: Lab. Lipoprotein Metab., Clin. Res. Inst. Montreal, Montreal, QC, H2W 1R7, Can.
SOURCE: Arteriosclerosis (Dallas) (1986), 6(3), 285-96
CODEN: ARTRDW; ISSN: 0276-5047
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Two series of **monoclonal antibodies** (MAB) directed against apolipoprotein A-I (apo A-I) reacted differentially with freshly prepd. sera or plasma. MAB from Series 1 were obtained after immunization and screening with purified apo A-I, while those from Series 2 were obtained by immunization with high-d. lipoprotein (HDL) and screening with both HDL and apo A-I. Series 2 MAB 5F6, 3G10, and 4F7 reacted better with fresh material than material stored at 4.degree. for 1 mo. or more. Conversely, Series 1 MAB 3D4, and 6B8, and Series 2 MAB 2F1 reacted more strongly with the stored prepns. Series 2 MAB 4H1 reacted equally with stored or fresh material. The inability of 3D4 and 6B8 to react with fresh sera or plasma was not due to an inhibitor in the fresh material. Prepn. of HDL from serum or plasma and delipidation of this material had no effect on the above phenomena, which appears related directly to apo A-I and not to the interaction of apo A-I with lipids. The variation of immunoreactivity with storage at 4.degree. was also unrelated to proteolysis of apo A-I. Alk. treatment of freshly prepd. sera, HDL, or apo HDL with NaOH simulated the effect of storage, allowing this material to react strongly with MAB 3D4, 6B8. There was a decrease in the reactivity of MAB 5F6 with alkali-treated fresh material compared to untreated fresh material. However, further investigation showed that alk. treatment does not completely mimic the effect of storage. Thus, in vitro conditions (storage or alk. treatment) selectively modify certain antigenic sites of apo A-I, but not others. This phenomenon, which is probably related to deamidation, may affect apo A-I immunoassays with either monoclonal or polyclonal antibodies.

L14 ANSWER 18 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1985:592477 HCAPLUS
DOCUMENT NUMBER: 103:192477
TITLE: Radioimmunoassay of **human** plasma **apolipoprotein A-1**: pretreatment of plasma with guanidine hydrochloride
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CORPORATE SOURCE: Sch. Med., Nagasaki Univ., Nagasaki, 852, Japan
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AB In an attempt to find a rapid and simple procedure for RIA of **apolipoprotein A-1** without using org. solvents, **human** serum was subjected to various phys. and chem. treatments which disrupt or alter high-d. lipoproteins (**HDL**). **Heating** at 52.degree. for 3 h and treatment with 0.1% Triton X-100, 0.05M SDS, and 8M urea resulted in an increased immunoreactivity of **apolipoprotein A-1**; the reactivity, however, was much lower than that obtained from delipidated samples. Treatment with 6M guanidine-HCl for 3 h at 37.degree. prior to the RIA resulted in a maximal increase of **apolipoprotein A-1** immunoractivity comparable to that obtained with delipidated samples. This pretreatment permits a large no. of samples to be assayed with complete recovery of **apolipoprotein A-1**.

L14 ANSWER 19 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
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TITLE: Studies of the lipid binding characteristics of the apolipoproteins from **human** high density lipoprotein. II. Calorimetry of the binding of APO

AI and APO AII with phospholipids

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AB The interactions of lysophosphatidylcholine and synthetic 1,2-dimyristoyl-sn-glycerophosphocholine (DMPC) liposomes with the isolated high-d. lipoprotein (**HDL**)-apolipoproteins, apo AI and apo AII, were studied by microcalorimetry. Complex formation is a highly exothermal process characterized by a maximal enthalpy of .apprx.-200 kcal/mole of apoprotein when added to DMPC at 28.degree. in 0.05M Na carbonate/bicarbonate buffer, pH 9.6. For the apo AI apoprotein, the binding consists of 2 processes, 1 endothermal occurring at low phospholipid/protein ratios and 1 exothermal predominant at higher phospholipid levels. The endothermal process was attributed to a lipid-induced disaggregation of apo AI whereas the exothermal process is similar to the binding of apo AII or apo **HDL** to phospholipids. The binding of a const. amt. of DMPC to apoprotein mixts. contg. various proportions of apo AI and apo AII demonstrates the existence of a maximal assocn. at a 1:1 molar ratio of the apolipoproteins. The sequential binding of DMPC to apo AI and apo AII suggested the existence of cooperativity between the 2 apoproteins in phospholipid binding as apo AII promotes the incorporation of apo AI into a protein-phospholipid complex. Finally, the various contributions to the binding enthalpy such as the 1 arising from an increase in apoprotein helicity were evaluated. The enthalpy of binding expressed in kcal/amino acid enable a classification of the apolipoproteins according to their lipid binding affinity as: apo AII .simeq. apo CIII > apo AI.